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BUDDHISM IN INDIA.

Buddhist India. (Stories of the Nations Series.) By Prof. Rhys-Davids. Pp. xv + 332. (London: Fisher Unwin, 1903.) Price 5*s*.

THE keynote to Prof. Rhys-Davids's work on Buddhist India is to be found in his preface. He presents to us a picture of Indian social existence at the time when Buddhism first dawned on the world, avowedly depicted from the point of view of the Rajput rather than from that of the Brahmin. Nor is any apology needed for assuming this position. A history of England completed entirely from such references to its social and economic condition from time to time as might be found in the theological treatises of eminent churchmen would certainly not be regarded as satisfactory, and it is an immense gain to our power of realising past problems of Oriental life and civilisation that the learned professor should have been able to marshal so many points of valuable information from independent lay sources, and to give us new views from a new standpoint. He is at great pains to show the real position which the priesthood of India held in the seventh century A.D., when the world was ripe for Buddhism; and he deduces from an analysis of Pali writings (previous to the general adoption of Sanscrit as the classical language of literature) a very clear idea of early Brahminism in days when the alphabet, indeed, had long been introduced to India from Mesopotamia, but when "literature" existed in men's memories and not in the concrete form of manuscript. All this part of the book is excellent. We see the Kshatriyas—of the noble "colour" (not caste)—in their proper position of relative importance to the Brahmin, and the latter by no means enjoying that social status of dominant and arrogant priesthood which we have always been accustomed to regard as even more distinctive of early Brahminism than of the Brahminism of to-day.

The early Brahmin is now to be regarded as the thinker and learner, the philosopher and minister, ready to adapt his views to those of the public if necessary, with wide toleration seeking to preserve his influence by the adoption of elastic principles. His very gods changed with the times, and both free-thinking and free discussion were not only permitted, but encouraged to an extent probably unparalleled in the history of the world. The soul of the Upanishads had already become the one primeval world-soul from which all other souls emanated, when Buddhism arose; and the remarkable feature about this approximation to a great central truth was that it owed its existence, not to Brahmin philosophy, but to the conception of lay speculation. Thus Buddhism entered the world at the right psychological moment. The world of India at least was ready for it.

But deeply interesting as is this scholarly inquiry into the conditions of literature and religion which prevailed at the time of Buddha's birth, perhaps a little too much space in what is necessarily a crowded work has been devoted to it. It is true that we have graphic pictures presented to the imagination of village and town life, of social intercourse and the relations subsisting between the various grades of a society in which caste distinctions were real enough, but possibly not more pronounced than analogous distinctions in European countries at the same date; but they are restricted to Buddhist India, which was, after all, only a part of India, and we have very scanty glimpses of the relations existing between Buddhist India and the rest of the continent. Nor does the book much assist us to define the geographical boundaries of Buddhist India.

Buddhism was the paramount faith only at certain centres; these centres were far apart, necessitating long and weary pilgrimages from one to another. The earliest Buddhist records contain a "stock" list of the sixteen Powers which constituted Buddhist India, but this list is geographically deficient, for it ignores the whole of south India and Ceylon, and only deals with the area of northern India bounded by the Himalayas on the north, the Vindhyas on the south, the Ganges on the east, and the mountains beyond the Indus on the west. Undoubtedly the most remarkable feature about Buddhism is its absolute extinction in India, the land of its birth, at the hands of the Brahmins, and its extraordinary development in countries beyond India, where it is still a living and a proselytising faith. The connection between Buddhist India and the countries of the borderland, the gradual spread of the faith to the valley of the Kabul River and beyond Kabul to Bamian and Haibak; or to the Swat Valley and Dir, and over the Himalayas to the cities (now buried beneath the sand) of Khotan, would have been an interesting subject of inquiry, for it would illustrate the enormous influence of Buddhist India in the process of civilising the rest of Asia.

The apostles of Buddhism claim that it has been the greatest civilising agent in the world. It has left no mark in India—what has it done elsewhere? Long after the Mohammedan wave of conquest swept through Sind to the Punjab in the eighth century A.D. we know that a Buddhist province of Sind (called Bodh) still retained its infidel proclivities, and the capital of it (Gandhar or Kandhar) is not far from the Gandāva of to-day. Buddhist priests had ruled at Las Bela, where Buddhist caves are to be found near by. Was this the last stand made by Buddhism on the Indian side of the mountains west of the Indus?

There is a passage in the book which might be misunderstood. It is said of the fifteenth of the sixteen "Great countries"—or Powers—that

"Gandhāra, modern Kandahar, was the district of eastern Afghanistan, and it probably included the north-west of the Punjab. Its capital was Taxila."

Gandhāra *was* the north-west of the Punjab (as rightly shown in the little sketch map at the end of the book), but it had nothing to do with "modern Kandahar," or even with that other ancient Kandahar (or Kandhar) of which we have just spoken. It was the almost universal goal of the pilgrims from China who flocked in large numbers through the then open routes of Takla Makan in Chinese Turkesan, across

the Hindu Kush, and through the terrible passes and defiles of Darél to the lower Swat Valley and to the monasteries and monuments of the Punjab.

It would have been interesting, too, if something of the northern art of Buddhist India had been illustrated, as well as the sculptures of Sanchi. It is in the north that the Greek influence is so marked in sculptural art as to render it quite distinct in character from the rude and riotous productions of the indigenous artist of the south, probably educated in Hindu schools.

But it is impossible within the limits of a popular historiette to compass more than a cursory account of so astonishing a moral phenomenon in the world's history as the rise of Buddhism and its marvellous outspread; or to present a view of Indian existence other than that which marked certain phases of its career. Prof. Rhys-Davids has done invaluable service in illustrating the earliest phase of Buddhist inception, and in giving to the world a far more lucid idea of the character of the three great Buddhist kings and heroes —Chandragupta, Asoka, and Kanishka—than is to be found elsewhere in the popular literature of the day. For it is only a great scholar who could have done this so well.

The work is scholarly throughout, as well as popular, and fully maintains the high standard of the fascinating series of "stories" of which it forms a noteworthy unit.

ACETYLENE.

Acetylene: its Generation and Use. By F. H. Leeds and W. J. A. Butterfield. Pp. x+276. (London: C. Griffin and Co., Ltd., 1903.) Price 5s. net.

THE steady advance made during the past few years by this beautiful illuminant fully justifies the production of the practical handbook which Messrs. Leeds and Butterfield have now placed before the public.

In this work they have described and explained the physical and chemical phenomena attending the generation and combustion of the gas, and also its employment in the various directions in which it has of late been used.

The subject is thoroughly dealt with, and the book contains an enormous amount of information and common-sense advice, the only general criticism that can be urged against it being, perhaps, that of the occasional repetitions which are inseparable from dual authorship.

In the introductory chapter, whilst considering the advantages of acetylene as an illuminant, the authors deal with a point which, up to the present, has been too much overlooked with regard to illumination by flames, and that is the importance of the action that these have in burning up and destroying considerable quantities of the organic impurities present in the air of an inhabited room, a function which is of the utmost importance, and the absence of which is a considerable factor in the unpleasant nature of the atmosphere often found in rooms lighted by incandescent electric lamps.

An interesting feature is also to be found in the authors' attempt to compare the relative merits and cost of lighting by various illuminants on the basis of illuminating effect rather than illuminating power. That this difference does exist as a most important factor in illumination has long been recognised, and a moment's consideration will convince anyone that although a particular burner may yield a light of 25 candles, it will not be in any way equivalent in its power of effectively lighting a room to 25 candles distributed over the area of the room. If a satisfactory unit of comparison and an accurate method of determining the results could be obtained, this method of comparison would offer enormous advantages over the ordinary photometric method.

In compiling the table the authors have taken as the standard of a well-lighted room the being able to read with ease ordinary print in every part of it, but it is clear that so much depends upon the personal factor that whilst one observer may look up a train in Bradshaw with ease and comfort, another might find a difficulty in dealing with fair-sized print, and on such a basis it is hard to found a satisfactory unit of comparison.

In dealing with the physics and chemistry of the actions taking place between carbide and water in the generation of acetylene, the whole question is very carefully and thoroughly treated, but in referring to the power of water in dissipating the heat generated during the action, a little too much stress is laid on the power of water in keeping down the temperature. The statement that

"if an excess of water is employed in an acetylene generator the temperature inside can never, except quite locally, exceed 100° C. however fast the carbide be decomposed"

is although perfectly correct, a little misleading. The importance of reducing the temperature in an acetylene generator to the lowest possible point is to prevent the formation of certain compounds which afterwards give rise to trouble in the consumption of the gas, and with a large generator of the type in which carbide is fed into water, although the water may be in very large excess, it is by no means unusual to find in the centre of the decomposing mass on the bottom of the apparatus a temperature capable of melting lead, this being due to the fact that when the carbide is fed in in large quantities, a crust of lime forms on the outside of the mass which becomes toughened by tarry products formed by the heat on the acetylene generated in the interior of the mass, and this partly by acting as a non-conductor and partly by keeping the carbide away from the large excess of water, allows an undue rise of temperature, and the acetylene generated is found as a result to contain considerable amounts of products of polymerisation.

In referring to the combustion of acetylene and its illuminating power, the authors conclude that it would be clearer to state the illuminating power of acetylene as 48 candles per cubic foot, rather than by accepting the arbitrary nomenclature of gas photometry to speak of it as 240 candles, inasmuch as in determining the illuminating power, the gas has to be burnt at the rate best suited for developing its light-giving properties, and the results so obtained calculated to a consumption of 5 cubic feet.